

# The Nation's First White Spaces Deployments

New Hanover County, NC



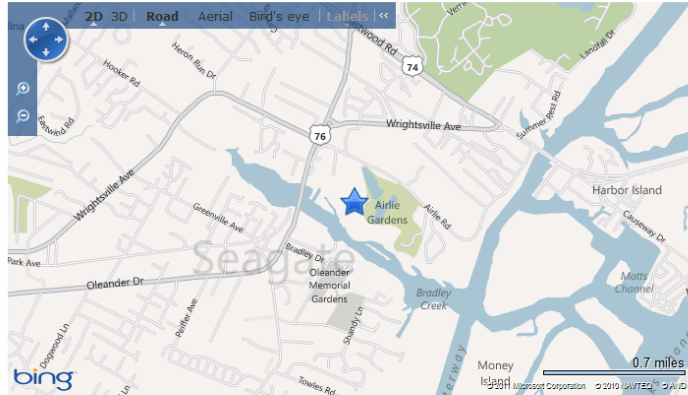
# What are the white spaces?

- Unused channels in the traditional TV bands – UHF and VHF
- Transition to digital television provided additional space
- Available white spaces are different in each geographical area



# White Spaces in Wilmington

Best match: 34.21509, -77.029664



The table shows all the 6 MHz TV channels between channels 2 and 51 that are potentially available for secondary use by White Space radios (i.e. TV Band Devices or TVBDs).

## Channel Map Legend

- ✗ Your location is within the service area of a TV station or other licensed user and this channel cannot be used by a TVBD.
- ✓ This channel is vacant in your location, and can potentially be used by your TVBD.
- ✓ This channel is vacant in your location, and can potentially be used by your TVBD, but personal portable devices may not be used on channels 2-20.
- 📻 This channel is reserved for wireless microphone use.

## Available Channels

Fixed TVBD <= 30m

HAAT: 1.13 meters

[View Full Map](#)

2	✓	19	✗	36	📻
3	✗	20	✓	37	✗
4	✗	21	✓	38	📻
5	✓	22	✓	39	✗
6	✓	23	✓	40	✗
7	✓	24	✓	41	✗
8	✓	25	✓	42	✓
9	✓	26	✓	43	✗
10	✗	27	✓	44	✗
11	📻	28	✗	45	✗
12	✗	29	✗	46	✗
13	📻	30	✗	47	✗
14	✓	31	✗	48	✓
15	✓	32	✓	49	✓
16	✓	33	✗	50	✗
17	✓	34	✗	51	✗
18	✓	35	✗		

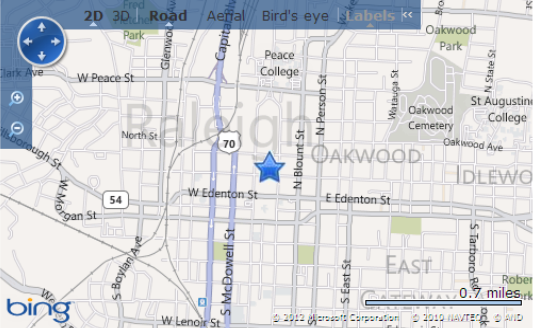
- Not many broadcast channels
- Each check mark is an available 6 MHz channel



New Hanover County

# White Spaces in Raleigh

Best match: 16 W Jones St, Raleigh, NC 27601



View Full Map HAAT: 2.36 meters

Interested in the rules regarding wireless microphone operation in the TV white spaces bands? [Learn More >>](#)

This product is protected by US and international patents and patent filings. [Click here](#) to review.

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Channel Number	Frequency Range (MHz)	Allowable Antenna Height (m)	Noise Floor (dBm)
2	54-60	30	(i)
5	76-82	30	(i)
6	82-88	30	(i)
7	174-180	30	(i)
8	180-186	30	(i)
21	512-518	30	(i)

- More licensed broadcasters in this market
- Fewer channels available for white spaces



# What's so great about it?

- Lower frequencies than traditional Wi-Fi – goes through things like trees and walls
- Travels longer distances
- Abundant in rural areas



# NHC's Installations

- Airlie Gardens – cameras – observation and surveillance – public wireless (future)
- Hugh MacRae Park – Public wireless and video surveillance
- Veterans' Park – Video surveillance – Public wireless

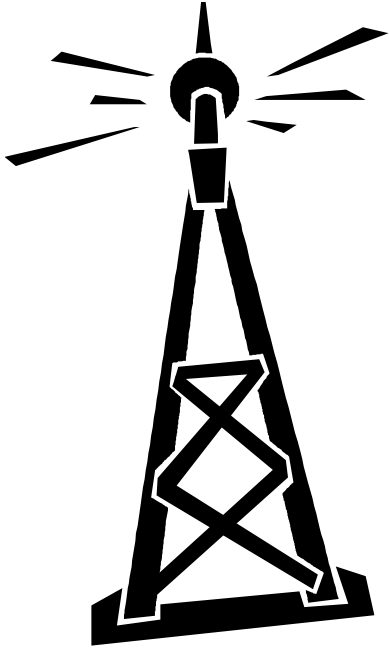


# Costs

- Technology is still in its infancy so equipment is specialty gear – no mass production
- Costs will come down as standards are set and demand increases
- NHC is renting the infrastructure as a service from TV Band Services



# Future Applications



- Water quality monitoring
- Remote lighting control
- Replacement for high-cost, low-speed links
- Mobile command post
- Fire ground data connection





# QUESTIONS?

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